

## HISTORY

Radicchio is a red-leafed chicory of Italian origin that makes a small dense head, usually round. As with “zucchini” the “cchi” combination produces a hard “k” sound and is pronounced “ra-DEE-kee-o”. The trimmed head is sized between an orange and a grapefruit and is colored bright winey-red with raised white veins. This round type is called Chioggia; another type, which resembles a tiny purple romaine lettuce, is called Trevisio. The outer leaves can be red, green or a combination, like beet greens. Although bitter to American tastes, radicchio is so attractive and has such an appealing texture that it is becoming popular as a salad ingredient. As a garnish, it is unexcelled. Cooking, usually by grilling and sautéing, turns the red to brown but accentuates the crunchy texture.

Part of the radicchio's appeal and high retail value is due to its semi-wild nature. It lacks uniformity, both in plant type and maturity, so not every plant heads up well or at the same time. Until the recent introduction of more uniform hybrids, production was a gamble, requiring a precise but unpredictable combination of strain, climate, and date. Previously, the most reliable crops were produced by over-wintering (in mild climates) and harvesting heads from new growth in the spring. The new varieties, refined from Italian Chioggia stock, do not require this or any form of cutting back the leafy growth. Instead, they are grown like head lettuce, but require two or four weeks more than iceberg or romaine.

## GENERAL CULTURAL INFORMATION

Although success with these new varieties is more likely than before, radicchio is still quite unpredictable as compared to heading vegetables such as cabbage and lettuce. For this reason, we recommend that growers determine optimum planting dates and variety selection by conducting their own trials, with plantings at 2-3 week intervals using at least 20 plants per variety.

Long days and/or summer heat, or cold conditions when plants are young, can cause bolting. Tip burn can be a problem in late spring and summer. In general, fall crops are more problem free and produce larger heads. Small dense heads with intense color are somewhat more bitter than larger, less brilliantly colored heads. Big differences between day and night temperatures during the last four weeks of growth are thought to result in good solid heads and a bright color.

Radicchio can tolerate fall frosts very well, although growth in very cold weather is slow. Leafier plants (or varieties) are hardier, and may be cut even when completely frozen. After thawing slowly, the damaged outer leaves can be peeled away leaving the head itself in usable condition, although not necessarily marketable. Check catalog listings for most frost-tolerant varieties.

## SEEDING AND PLANTING

There are 13,000-20,000 seeds per ounce, which direct-seeds 3300 feet at 3 seeds every 8 inches; 8.7 ounces will sow an acre. Transplanting is usually recommended, in which case one ounce of seed results in a potential of 10,500 seedlings. This would be proportionately fewer than cell type containers that are over-seeded and thinned. A typical planting scheme is in rows 2 feet apart (or three 18" rows per 6 foot beds) and plants spaced 8 inches apart in the row, resulting in 32,670 plants per acre. A small Johnny's mini-pack contains about 100 seeds, should you only wish a small trial. Check catalog listings for availability of pelleted seeds.

Direct seeding is unlikely in early spring, due to low soil temperature and risk of cold-induced bolting, but is possible for a fall crop as long as the soil doesn't dry out during the seedling stage. Transplants are more reliable. We sow in a greenhouse using plug flats with ¾-inch tapered cells and a fine-texture peat starting mix, covering the seeds lightly with fine vermiculite. Ideal germination temperature is 75°F (24°C) days and 68°F (20°C) nights. After seedlings emerge (in 4 days under ideal conditions, but up to 14 days.), we feed using a

soluble fertilizer such as liquid seaweed/fish. Seedlings could be ready to set out in 3-4 weeks. When setting plants out, space transplants 8 inches apart.

### **SOIL PREPARATION, CARE AND HARVESTING**

Soil and fertility requirements are the same as for lettuce. Soil must be well drained and fertile, with irrigation available. We use farm-made compost. New York State Extension trials, conducted by Roger Kline, found peat soils to be ideal and soils with high organic matter need little or no amendment. The Florida trials on Eau Gallie fine sand were prepared with 0.5-2.0-1.0 lb. per N-P-K linear bed feet. The Florida raised beds used black plastic mulch in the spring (for soil warming) and white plastic in the fall (to reflect heat). Typically the crop is not mulched, and weeds are controlled with mechanical cultivation and hand weeding. Use of row covers might be ill advised if they moderate the day to night temperature fluctuations. Chicory is generally drought tolerant, but we suspect that uninterrupted growth will produce the best heads, therefore regular watering is desired. Too much water and dampness encourages the same bottom rot problem found in lettuce, although radicchio is less susceptible.

Expect harvest to begin 6-8 weeks after setting seedlings out. In fall, maturity may be concentrated and the crop harvested in 1 to 2 cuts, but in earlier plantings expect up to a 3-week harvest period. When the head is somewhat firm—between a butterhead and iceberg lettuce—radicchio is considered mature. After the head firms it will not gain in size and will either bolt or become too dense, depending on the season. Heads with a diameter less than 3.5 inches may not be marketable. A head size of 5 inches is ideal and is larger than the Italian imports. A point raising in the center of the head and a tightening or pulling away of the wrapped leaves indicate the beginning of over-maturity and bolting. Try to harvest before this stage.

### **HARVEST**

Radicchio imported from Italy is marketed trimmed to a neat round head, but since the outside leaves are attractive, it may be possible to market the heads with a few of these attached. In fact, restaurants often prefer looser rather than tight heads for ease in separation of whole leaves for garnishing. Cut while still cool in the morning, or chill immediately. Refrigerated dry in a perforated plastic bag, radicchio will keep 3-4 weeks. It does not discolor if cut with a stain-free knife.

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